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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR:	Zhou Yang et al.	)	EXAMINER:	R. Sergeant
SERIAL NO.:	09/280,601	)	ART UNIT:	1711
FILING DATE:	March 29, 1999	)		
FOR:	OPTICAL TERPOLYMER OF POLYISOCYANATE, POLYTHIOL AND POLYENE MONOMERS	)		

DECLARATION UNDER 37 CFR 1.132

Assistant Commissioner of Patents  
BOX NON-FEE AMENDMENT  
Washington, D.C. 20231

Dear Sir:

I, Zhou Yang, do hereby declare as follows:

- I. I am a co-inventor of the invention described and claimed in the above-identified application.
- II. I have had training and experience as a chemist and specialize in optical polymer chemistry. I graduated from the China University of Science and Technology in 1982 with a Bachelors Degree in Polymer Science. I also graduated from Beijing Institute of Chemical Technology in 1984 with a Masters Degree in Polymer Science and from Antwerp University UIA in 1990 with a Ph.D. Degree in Polymer Science. I have worked as a polymer researcher since 1991. Since 1994 I have been employed by Optima, Inc. and am presently classified as Director of Research and Development and supervise the

formulation of compositions and the polymerization of such compositions to form optical articles.

- III. I was informed that in the parent application serial no. 08/425,958 filed on April 19, 1995 that conflicting subject matter was indicated with U.S. Patent No. 5,736,609 issued April 7, 1998 to Irizato et al. and assigned to Mitsui Toatsui Chemicals, Inc. To overcome the conflicting claims in the parent application the claims in the parent application were amended to specifically exclude the polythiol monomer defined and claimed in the Irizato et al. patent. I was also informed that a Notice of Allowance was received and a patent is expected to issue on the parent application shortly.
- IV. I was also informed that the subject patent application was filed to copy all the claims of the Irizato et al. patent and that claims 23-58 in the subject patent application correspond exactly to claims 1-36 of the Irizato et al. patent.
- V. I was also informed that the new claims 23-58 have been rejected under 35 USC 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors at the time the application was filed had possession of the claimed invention. Specifically, the Examiner contends that support has not been found for the range of polythiol compound represented by formula (1) of the Irizato et al. patent. Also, that clear support has not been found for the terminology "neither a hydroxyl group nor a Mercapto group" and for the subject matter in claims 25, 26, 29 and 30.

- VI. I have reviewed the Irizato et al. patent and formula (1) of the patent. Formula (1) requires at least two (2) mercapto groups in the compound. In the subject patent application the invention covers an optical terpolymer of polyisocyanate, polythiol and polyene monomers. These monomers are reacted to form a terpolymer and a number of polythiol monomers were disclosed in the patent application. One of the polythiol monomers is 1,2,3-propanetrithiol. This compound falls within formula (1) of the Irizato et al. patent and shows that such polythiols as claimed in Irizato et al. are contemplated in the subject patent application. The subject invention is directed to an optical terpolymer in which one of the monomers reacted is a polythiol and a specific polythiol disclosed in the subject application is covered by claimed formula (1) of Irizato et al.
- VII. Likewise, with regard to the polyene monomer containing neither a hydroxyl group nor a mercapto group, in the specification there are disclosed a number of polyene compounds which do not contain a hydroxyl group nor a mercapto group. Specifically, 1,6-hexane-diacylate or dimethacrylate and pentaerythritol triacylate or trimethacrylate and pentaerythritol tetraacylate or tetramethacrylate. Accordingly, a number of compounds were disclosed which encompasses polyenes containing neither a hydroxyl group nor a mercapto group.
- VIII. Regarding claims 25, 26, 29 and 30 of the subject patent application wherein the sulfur-containing urethane-based resin composition also contains another polythiol compound or a thiol compound having a hydroxyl group in addition to the polythiol claimed the specification on page 11, lines 4-5 indicates that the

active hydrogen containing compounds may be used singly or in combination as a mixture. A ratio of functional groups is also shown in the application on page 11, lines 13-20.

- IX. The subject invention is based on the discovery of forming optical terpolymers made by reacting polythiols with both polyenes and polyisocyanates to form a homogeneous system without any significant phase separation. A number of polythiol and polyene monomers were disclosed which fall within the claims of the Irizato et al. patent and I conclude that there is conflicting subject matter between the Irizato et al. patent and the subject patent application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements and information are believed to be true; I pray that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated this 28<sup>th</sup> day of Oct. 1999.

  
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Zhou Yang